**CHAPTER 2**

**SYSTEM ANALYSIS**

**2.1. Existing System:**

There is a wide variety of existing solution that attempts to solve the tracking of bus problem. Most of the existing solution primarily aims to show the bus arrival time In an approximate way, and this is carried out without tracking the location of bus and traffic data, this system assumes an average running speed of a bus and all the data are hardcoded accordingly. In this kind of system most of the time the arrival estimation time will not be accurate, in this case, if a new bus is to be added, a whole new data set must be added to the existing model. Another similar system which helps the user to see the various bus routes from one place to another, even this Android app has all the data predefined.

Latest way of tracking MTC bus is using cameras and image processing if a bus crosses any major bus depot dial BA camera noting the bus numbers and also the route number which will be automatically updated to the server so that the user can view which location the bus is there.

**2.1. Proposed System:**

We propose to use the latitude and the longitude data of a particular bus which is traveling from one depot go to another. We provide a user-friendly interface to all the bus drivers in which they can just select the bus number which they are driving all other works will be taken care by the system, like updating the latitude and longitude information of a bus in a small time intervals to the server. Similarly we create another one user interface for the passenger who will give the start point and endpoint as an input for which the bus route will be shown to the user and if the user is ok with that bus route then the user can go to the next page and track the live location of the bus, which is done by retrieving the posted data by the driver's mobile on to the server, and plotting those points in the uses mobile's map. By using this method one can efficiently know the location of the bus and also track the exact location of the bus which he or she wants to board. in this simple method, no geo-fencing algorithms are used so this solution will be one of the most cost efficient and code efficient solution to track all location of any moving object.